

FAIRCHILD

A Schlumberger Company

FDH300/FDLL300
FDH333/FDLL333

T-01-09

High Conductance Low
Leakage Diodes

- BV... 150 V (MIN) @ 100 μ A
- I_R ... 1.0 nA (MAX) @ 125 V (FDH300), 3.0 nA (MAX) @ 125 V (FDH333)

ABSOLUTE MAXIMUM RATINGS (Note 1)**Temperatures**

Storage Temperature Range

-65°C to +200°C

Maximum Junction Operating Temperature

+175°C

Lead Temperature

+260°C

Power Dissipation (Note 2)

Maximum Total Dissipation at 25°C Ambient

500 mW

Linear Derating Factor (from 25°C)

3.33 mW/°C

Maximum Voltages and Currents

WIV

Working Inverse Voltage

125 V

 I_O

Average Rectified Current

200 mA

 I_F

Forward Current Steady State

500 mA

 I_f

Recurrent Peak Forward Current

600 mA

 $I_f(\text{surge})$

Peak Forward Surge Current

Pulse Width = 1.0 s

1.0 A

Pulse Width = 1.0 μ s

4.0 A

PACKAGES

FDH300 DO-35

FDH333 DO-35

FDLL300 LL-34

FDLL333 LL-34

If you need this device in the SOT package, an electrical equivalent is available. See FDSO1500 family.

ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)

SYMBOL	CHARACTERISTIC	FDH300		FDH333		UNITS	TEST CONDITIONS
		MIN	MAX	MIN	MAX		
V_F	Forward Voltage			0.9	1.15	V	$I_F = 300$ mA
				0.88	1.08	V	$I_F = 250$ mA
			1.0	0.87	1.05	V	$I_F = 200$ mA
				0.86	0.97	V	$I_F = 150$ mA
				0.92	0.83	V	$I_F = 100$ mA
				0.88	0.80	V	$I_F = 50$ mA
				0.8		V	$I_F = 10$ mA
				0.75		V	$I_F = 5.0$ mA
				0.68		V	$I_F = 1.0$ mA
						V	
I_R	Reverse Current		1.0		3.0	nA	$V_R = 125$ V
			3.0			μ A	$V_R = 125$ V, $T_A = 150^\circ\text{C}$
					500	nA	$V_R = 125$ V, $T_A = 100^\circ\text{C}$
C	Capacitance		6.0		6.0	pF	$V_R = 0$, $f = 1$ MHz
BV	Breakdown Voltage	150		150		V	$I_R = 100$ μ A

NOTES:

1. The maximum ratings are limiting values above which life or satisfactory performance may be impaired.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
3. For family characteristic curves, refer to Chapter 4, D2.